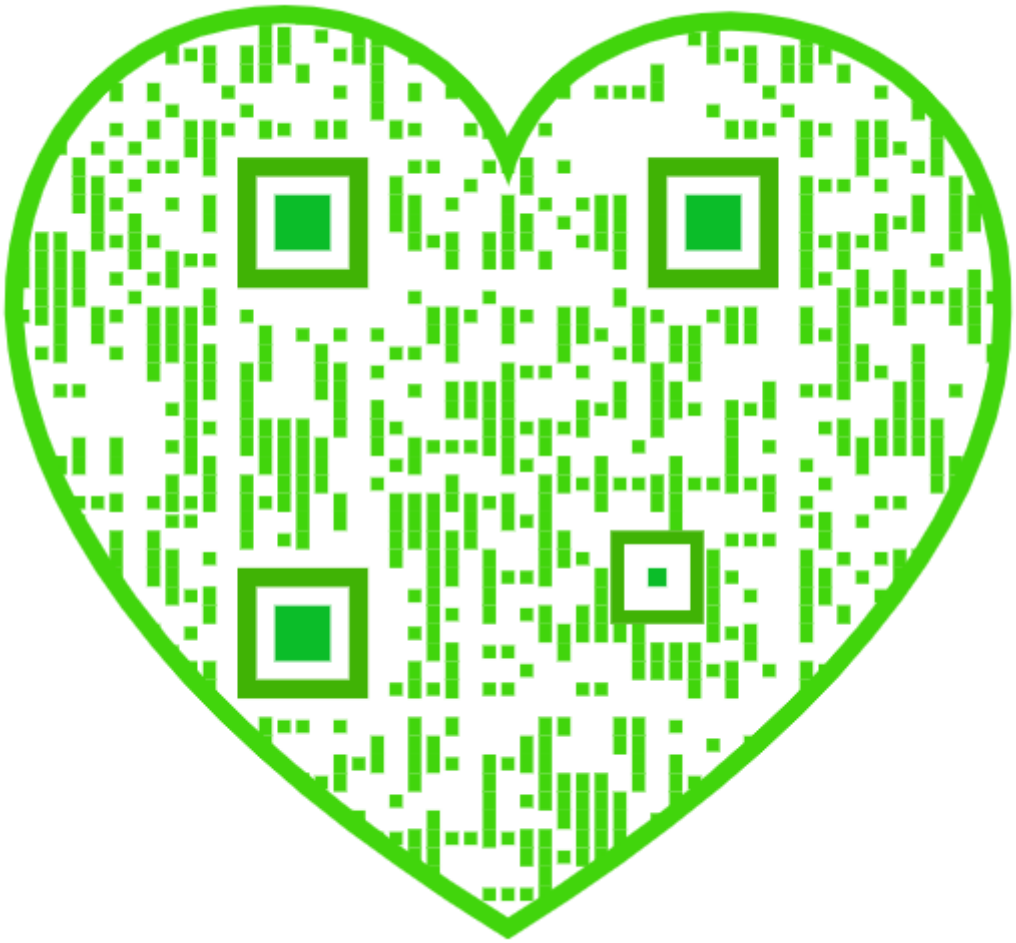

PHONICS AND READING

FOR THE USE OF

TEACHERS

AND OF

STUDENTS IN NORMAL AND HIGH SCHOOLS

BY

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PREFACE.

It is the purpose of the authors in the preparation of this book, which is the outgrowth of several years' work in teaching reading in the class room of the Normal School, (1) to furnish a more available scientific basis for the study and teaching of the elementary sounds of the English language than has hitherto appeared; (2) to suggest to teachers of reading, literature, and language what the authors deem to be the most desirable means and devices of securing a more beautiful oral speech in their pupils. In pursuance of these ends the authors have given little material for formal drill in the belief that, in accordance with ideas hereinafter expressed, the effects of drill are only wholesome when the drill act is in vital touch with the pupil's effort to read or to speak to some thought-purpose, and that the individual teacher is the only one who can prescribe rational drill exercises for the individual class.

The authors wish to refer to the following works as the authorities that have furnished a basis for the system of this book: *An Outline of Vocal Physiology* and *Bell's Visible Speech*, by Charles W. Kidder;

Visible Speech, the Science of Universal Alphabetics, by Alexander Melville Bell; the *Standard, Century*, and *Webster's International Dictionaries.*

The following works treat a part of the field of this book and are noted here for the further reference of the student: *Drill Book in Dictionary Work*, Metcalf and DeGarmo; *A List of All the Monosyllables of the English Language, Phonetically Arranged, etc.*, by Francis W. Parker; *Order of Exercises in Elocution*, by Frank Stuart Parker; *The Voice and Spiritual Education*, by Hiram Corson. The close relation that exists between the work of phonetic drill and that of physical culture suggests the need of referring the student also to certain standard works in gymnastics: *Swedish Educational Gymnastics*, by Baron Posse; *Physical Culture*, by C. W. Emerson; *Physical Culture*, Louise Preece.

The authors also desire to express here their thanks for the kind suggestions and assistance of Mrs. Ida M. Riley, of the Columbia School of Oratory, Chicago; of Charles W. Kidder, of the Emerson College of Oratory, Boston; and of L. A. Butterfield, of Brattleboro, Vt., a former student of Dr. Alexander Graham Bell.

C. C. VAN LIEW,
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SECTION I.

THE ORGANS OF SPEECH.

The chief organs used in forming the elements of speech are the Lips, Teeth, Tongue, Palate, and Vocal Cords.

For the sake of convenience and definiteness in describing the position of the organs of speech the

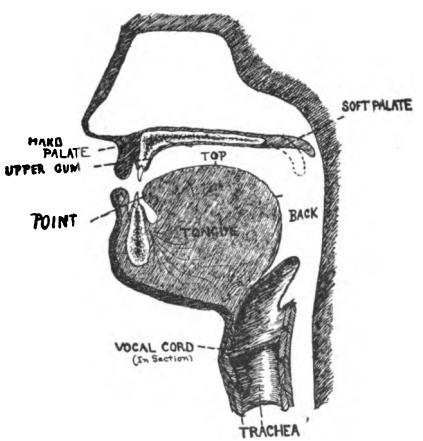

Fig. 1.

above figure also distinguishes the following subdivisions of the tongue and palate:

Tongue: Point, top, back.

Palate: Upper gum, hard palate, soft palate.

In articulating the consonant sounds these organs and parts work together as follows:

Lower lip with upper lip, as in *p*.

Lower lip with upper teeth, as in *f*.

Point of tongue with teeth, as in *th*.

Point of tongue with upper gum, as in *t*.

Top of tongue with hard palate, as in *sh*.

Back of tongue with soft palate, as in *k*.

In articulating the vowels, the form of the sound is determined chiefly by the arching of the tongue toward the roof of the mouth at approximately three different scales (comp. page 15). Thus the cavity of the mouth is divided into two chambers during the production of the vowel. The action of the *point* of the tongue is not essential to the formation of any English vowel.

SECTION II.

THE CONSONANTS.

PLACE OF ARTICULATION.	ORAL.							NASAL.	
	MOMENTARY.		CONTINUOUS.					CONTIN-UOUS.	
	MUTES.		FRICATIVES.			LIQUIDS.		LIQUIDS.	
	Sonant.	Surd.	Sonant.	Surd.		Sonant.		Sonant.	
Lips (Labials)	*b* (bet)	*p* (pet)	*w* (was)	*wh* (what)		.....		*m* (most)	
Lower lip and upper teeth (Labio-dentals)	.....	.....	*v* (vast)	*f* (fast)		.....		.....	
Point of tongue and teeth (Lingua-dentals)	.....	.....	*th* (this)	*th* (thin)		.....		.....	
Point of tongue and upper gum (Dentals)	*d* (dust)	*t* (tin)	*z* (zest)	*s* (sit)		*l* (let) *r* (run)		*n* (not)	
Top of tongue and hard palate, forward (Palatals)	*j* (just)	*ch* (chin)	*zh* (azure)	*sh* (shall)		*r* (run)		.....	
Top of tongue and hard palate, back (Palatals)	.....	.....	*y* (yet)	.....		.....		.....	
Back of tongue and soft palate (Gutturals)	*g* (get)	*k* (kill)	.....	.....		.....		*ng* (sing)	
In various places	.....	*h* (hush)	.....	.....		.....		.....	

EXPLANATION OF THE CONSONANT CHART.

The above scheme of elementary consonant sounds presents a classification based upon the position of the organs of speech and the general character of the consonants. Taken horizontally, each class contains consonant sounds that are produced by the same or similar positions of the organs of speech. Taken vertically, each class contains consonants having similar qualities of sound. They may, accordingly, be practiced either horizontally or vertically.

In producing the oral sounds, the passage from the pharynx through the nose is cut off by the soft palate, acting as a valve; the sound is directed almost entirely through the mouth (hence oral). In producing the nasal sounds, this passage through the nose is open, the soft palate being depressed, and the sound is directed chiefly through the nose (see Fig. 1). The mutes are given their peculiar quality by the momentary stoppage or checking of the breath by the position of the vocal organs (hence the name); the fricatives are so called because of the noticeable friction of the breath upon the vocal passage. The liquids glide into or unite readily with other consonants (hence the name). The sonants are accompanied by tone produced by vibration of the vocal cords; the surds are produced wholly by

the breath without tone. *S*, *sh*, *zh*, and *z*, are also called sibilants or hissing sounds; *w* and *y* are also called semi-vowels as they partake respectively of the nature of the vowels o͝o and ē.

SUGGESTIONS ON THE STUDY AND PRACTICE OF THE CONSONANTS.

1. In forming the sounds of *b*, *d*, *j*, *g*, *p*, *t*, *ch*, *k*, the organs should be pressed firmly together; in the case of *b*, *d*, *j*, *g*, the pressure of the breath against

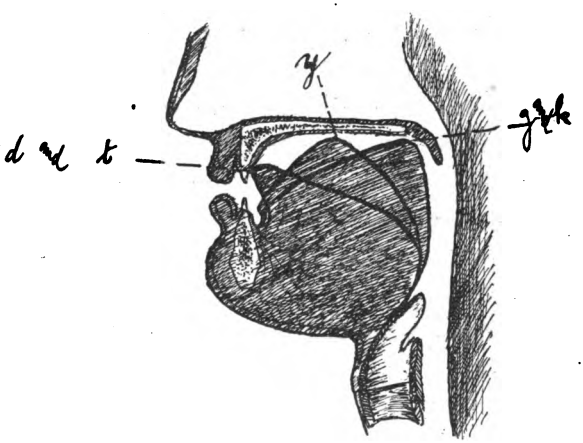

Fig. 2.

Diagram showing the position of the point of the tongue for *t* and *d*, of the top for *y*, and of the back of the tongue for *g* and *k*. These three consonant sounds are typical of the position of the tongue for many consonants.

the organs should be resisted until the vocal element of the consonant is heard, and then the position is quickly and lightly dropped. For *p*, *t*, *ch*, *k*, the ex-

plosion should be forcible without being loud, and care should be taken not to follow the sounds with an undue emission of breath or a whispered vowel. *D* sounds as *t* when preceded by a surd in the same syllable (hopped).

2. *J* and *ch* are compound sounds made up respectively of the combinations *dzh* and *tsh*. Each therefore requires the action of the point of the tongue against the upper gum as well as the action of the top of the tongue against the hard palate, as indicated in the chart. Although classed with the mutes they do not strictly belong there, as only the first part of each has the mute quality.

3. The following sounds also require a double action of the tongue, the action indicated in the chart being most prominent, however:

W and *wh;* the back of the tongue rises toward the soft palate;

Th and *th;* the top of the tongue rises toward the hard palate;

S and *z;* the top of the tongue rises toward the hard palate;

Sh and *zh;* the point of the tongue rises toward the upper gum.

4. For *w* and *wh* the lips should be closely rounded and the position held without change until all sound stops.

5. For *v* and *f* the lower lip should be held lightly against the upper teeth until the sound is complete.

6. For *th* the tongue should be placed far enough forward to avoid producing a hissing sound akin to *s*. (The lisper goes to the other extreme and makes *th's* out of all his *s's* by placing the tongue too far forward for the sound of *s*.)

7. In giving *z*, *s*, *zh*, and *sh*, the organs approach each other but do not touch. The position, however, should be firmly held and the sounds lightly given.

8. To arrive at the sound of *y*, pronounce a word containing this element, prolonging the sound of *y* until it is very emphatic to the ear. Then give it alone, being careful to hold the top of the tongue firmly and steadily in place, and to produce no additional sound. If the sound seems to resemble the sound of *e* very closely, the tongue should be pressed higher toward the hard palate. Make the sound continuous, not abrupt.

9. The sound represented by the digraph *ng* is not a combination of the sounds of *n* and *g*, but a single sound unlike any other English sound. In forming it the back of the tongue is drawn toward the soft palate and the sound escapes through the nasal passages.

10. In forming the sound of the letter *l* the point of the tongue presses firmly against the upper gum

and the sound escapes at the sides of the tongue. Be sure that the tongue is in position before any sound is heard.

11. For the sound of *r* the point of the tongue is raised toward the upper gum but does not touch it. (Some English-speaking persons produce the *r* still farther back in the mouth by raising the top of the tongue toward the hard palate. Accordingly Webster's International Dictionary distinguishes the two positions for the *r* as given in the chart.) In giving the forward *r*, be careful that the tongue does not turn back toward the hard palate and that the top of the tongue does not rise causing a sound akin to *ẽ*, but harsher.

12. *H* is produced by the expulsion of breath.

SECTION III.

THE VOWELS AND DIPHTHONGS.

It is well to practice the vowels as they are arranged in the following table (p. 16), thus securing the

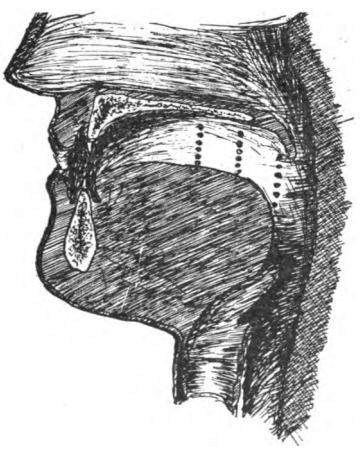

Fig. 3.

DIAGRAM SHOWING THE VOWEL SCALES.

(The dots indicate relatively the elevation of tongue for the different vowels of each scale. This distance represented is schematic only, not exact. But two English vowels are produced at the middle scale.)

assistance of one's knowledge of the successive positions of the tongue from above downward and from front to back. This method of practice also brings out the contrast between the cognate long and short

ARRANGEMENTS OF THE VOWELS AND DIPHTHONGS FOR PRACTICE.

Based on the Cut of Vowel-Scales, page 15.

Front Scale.	Middle or Mixed Scale.	Back Scale. With lip action.	Back Scale. Without lip action.
Long e— ē (eel).		Long double o— o̤ (ooze).	
Short i— ĭ (it).		Short double o— o̤ (look).	
Long a— ā (ate).		Long o— ō (old).	Short u— ŭ (up).
Short e— ĕ (bet).	Short Ital. a—ȧ (ask).	Short'n'd long o—ȯ (obey).	Long Italian a—ă (ah).
Long flat a—ȃ (air).		Broad o— ȯ (or).	
Short a— ă (at).	Tilde e— ẽ (her).	Short o— ŏ (odd).	

sounds in the first and third lines. It is also well to separate the long from the short vowels, keeping them otherwise in the same order, and practicing them as follows:

Long vowels, ē ā å ē — o͝o ō ô — ä.
Short vowels, ĭ ĕ ă — a͝o o͝o ŏ ŭ —.

The following table presents the composition of the English diphthongs:

ī=å+ĭ or ä+ē (īde'a) (ī'sland).
oi=ô+ĭ (oil).
ou=ä+o͝o or å+o͝o (out).
ū=y+o͝o or ĭ+o͝o (ūnit) (tūbe).

EXPLANATIONS AND SUGGESTIONS FOR THE STUDY AND PRACTICE OF THE VOWELS AND DIPHTHONGS.

The several vowels shown in the above diagrams are produced by certain upward movements of the tongue toward the hard or soft palates. These upward movements of the tongue produce fixed cavities, of varying size and shape, in which the voice is molded into special vowel forms.

In addition to the character given them by the upward movements of the tongue, the several sounds of *o*, produced at the back scale, also require a rounded lip form. The higher the position of the

tongue in the scale, the closer the rounding of the lips and the narrower the opening of the mouth. (Compare o̱, ō, ŏ).

A low vowel requires a wide opening of the mouth; a high vowel requires a much narrower opening. The movements of the mouth and the tongue are relatively the same for the front as for the back scale. (Compare ē, ā, ă).

The short vowels should be made short, clear, and incisive; the long vowels and the diphthongs should be made free, mellow, and strong.

1. Care should be taken not to make ē a harsh sound.

2. Ā ends in what may be called a vanish, which has the sound of ē; for the first part of the sound of ā only, therefore, is the tongue in the position indicated in the diagram, as it must rise to the position for ē to complete the sound. Give the sound without abbreviation.

3. For â the tongue rests at a point between that taken for ĕ and ă. To some ears it may resemble either of these sounds except in length. If the pupil's ear is dull and unable to recognize the sound when given alone, he may obtain a very true â by lengthening ĕ. Although unlike either ĕ or ă, it is better that the sound should resemble the former rather than the latter.

4 For ē the tongue lies almost flat in the mouth, the active part being a little back of the center. Care should be taken to keep the point of the tongue down and the center of the tongue from rising. Most people find it very difficult to give the ē without at the same time giving *r;* it is allowable, therefore, to let the sound finally pass into that of *r* after first rendering the sound of ē as pure as possible.

5. In giving o̤ care should be taken not to give the vowel a consonant quality by rounding the lips too closely. The lips should be rounded almost as much for o̤ as for o̤̤. Many persons omit to do this

6. Ō ends in a vanish, having the sound of o̤. As in the case of ā, the tongue performs the *first part only* at the point indicated in the diagram, and must rise to the highest back position to complete it.

7. Ȯ is a short vowel somewhat resembling ō. It occurs at the end of an unaccented syllable, but is wrongly used by some in such words as *road, coat, cloak,* where the sound of *o* should be distinctly long. The tongue falls a little lower for ȯ than for ō.

8. In giving ô there is a tendency to omit the lip action. An upright oval form of the mouth, produced by drawing the corners near together, gives a very true ô sound.

9. Ŏ is a very difficult sound for some persons. The tongue should move backward; the mouth open-

ing should be wide and the lips somewhat rounded. The sound cannot be given without lip action, similar to that for *ô*.

10. *ŭ* is produced with the tongue at the same point as for *ō*, the difference between the two vowels being that *ŭ* requires no lip action, has no vanish, and is a short sound.

11. *ä̇* is produced with the tongue in the position for *ȯ;* but it is a long vowel, having no lip action. Think of the word ah, and give the sound with a large circular mouth form.

12. *ȧ* is produced farther forward and higher in the mouth than *ä̇*. It should not be confounded with *ŏ*.

13. *Ou* is a compound of the sounds of *ä̇* and *o̤*, or *ȧ* and *o̤*. Care should be taken that *ă* is not substituted for the Italian sound. Broad free action, with attention to the composition (*ä̇*+*o̤*) of the sound, is necessary to secure good pronunciation of the *ou*, without the nasal quality that many give it.

14. *ū* is a diphthong having two distinct values; the first is a blending of *y* and *o̤*, the second a blending of *ĭ* and *o̤*. The former sound is used when *ū* begins a word, sometimes when it begins a syllable, and when preceded by the consonants, *b*, *p*, *m*, *v*, *f*, *k*, *c*, *g*, as in *unit*, *beauty*, *pure*, *mute*, *few*. The *ĭ*+*o̤* form is properly used when *ū* is preceded by *d*, *t*, *l*, *n*, *s*, *j*, *th*, as in *duty*, *tune*, *lute*.

15. Obscure vowels are produced during a quick transition of the tongue from one position to another and are found in unaccented syllables. No definite sound can be given them. They should resemble the short sound of the vowel indicated more nearly than any other sound. Examples, pil*o*t, fin*a*l, re*a*l, car*o*l.

16. The long sound of some vowels and the diphthongs ī and ū occurring at the end of an unaccented syllable may be abbreviated, thus: ô, â, ê, î, û (ôbey, châotic, êvade, îdea, ûnite). The effect varies according to the character of the vowel. Long ā loses its vanish; ē is abbreviated in length and sounds more like ĕ; ī takes the short vowel combination (compare page 17). In ô the vanish of ō is lost, and the tongue falls to a lower position, causing a somewhat different sound. In û the vowel ending of the diphthong, which is o͝o, is changed to o͝o. The long vowels thus shortened are not obscure and should not be confused with obscure vowels.

SECTION IV.

LISTS FOR PRONUNCIATION.

Lists for pronunciation are desirable and useful only in so far as, by placing great emphasis upon a class of words containing a common but usually mispronounced element, they assist the student to form the habit of correct pronunciation when any word of this class is used in reading or speaking. If such lists fail to accomplish this, *the formation of right habit*, they are practically useless. In any event they may easily be carried so far as to become purely mechanical and very distasteful. These lists should, therefore, be selected from the vocabulary the student is using, either in reading or in speaking. Even then as isolated lists they should be used very sparingly, the end in view being to secure a better attention to the element for which the drill is found desirable. The lists found below are merely intended to be suggestive as to the character of words which it is desirable to select.

The consonants as a rule seldom require lists for drill. If the teacher insists upon the distinct and complete enunciation of words, *i.e.*, especially, that

initial and final elements be given their full value in both reading and speaking, this will generally suffice. The negligent enunciation of word-endings does more to mar the spoken language than almost any other one fault of speech. This is a very common fault. Plural forms ending in *s*, especially those ending in sonant *s*, require careful attention. Also all words ending in the more difficult consonant combinations; *e. g.*, ths (breathes), rnd (burned), sts (ghosts), ng (bringing), bd (rubbed), kt (connect), sk (bask), nch (branch), etc. These combinations require more of an effort for their perfect enunciation than others, and hence are much more readily neglected. Try to have every consonant element receive its full force in the word. The careless and incomplete enunciation of words often interferes with the sense of the words; Shakespeare's "newest state" becomes "new estate;" and his "fresh assault" becomes "fresh salt."*

The need of making special effort to articulate some words as independent units is well illustrated in such expressions as "at all," and "don't you," which easily degenerate into "a tall" and "don't chew."

The vowels requiring special attention are â, ȧ, ŏ, ū; less urgent but still beneficial are lists for ä, ē, ô, o͞o, o͝o, oi, and ou.

*These expressions are from Macbeth, Act I, Scene 1.

1. âir, fair, bear, chair, care, share, wear, prayer, there.

2. ȧsk, grass, mast, branch, asp, bask, grant, past, aft, dance.

3. ŏdd, dog, God, on, not, fox, cognate, collect, connect, commence.

4. ūnite, tube, mute, mule, muse, blue, new, few, suit, use.

5. hälf, far, hark, hard, calm, part, arm, aunt, Carl, father.

6. fẽrn, learn pearl, ermine, earth, emerge, fervor.

7. fôr, cord, Lord, morn, or, war, cork, lawn, cause, ought.

8. o͞oze, coo, spoon, lose, loose, moon, troop, croup, fruit.

9. lo͝ok, could, foot, bosom, book, full, should, shook.

10. spout, mouth, out, house, cow, mow, howl, cowl, clown.

11. oil, moist, void, point, toy, toil, loyal, oyster, coil.

One of the best ways to secure a practical application of the principles taught, however, is to call the pupil's attention to the fact that many of the passages he reads offer special opportunities for exercise in a certain class of sounds, and that, indeed,

the beauty and force of the passage will be materially affected by negligent pronunciation. For example, in the following selection from Scott's Marmion, it will be noticed that the surds *t* and *th* and the sonants *d* and *th* are remarkably frequent:

"Breathes there a man, with soul so dead,
Who never to himself hath said—
This is my own, my native land!
Whose heart has ne'er within him burned,
As home his footsteps he hath turned
From wandering on a foreign strand?
If such there breathe, go, mark him well—" etc.

Call the pupils' attention to the fact that the neglect of these elements not only renders the passage obscure, but detracts very greatly from its force and beauty.

A similar study can be made in the case of Milton's L'Allegro:

"Haste thee, nymph, and bring with thee
Jest, and youthful Jollity,
Quips, and cranks, and wanton wiles,
Nods, and becks, and wreathéd smiles,
Such as hang on Hebe's cheek,
And love to live in dimple sleek;
Sport that wrinkled Care derides,
And Laughter holding both his sides."

Notice that this passage, as, indeed, much of the rest of the poem, is full of difficult consonant combinations (as mentioned above), occuring at the end of syllables. Yet the very lighthearted and almost

wanton spirit of revelry, that characterizes the poem, can only be reproduced when these same combinations of sound are lightly, easily, and perfectly produced. The hearer must not find the reader's pronunciation either labored or indistinct; otherwise he loses the effect of the poem.

The following passage from Byron's Apostrophe to the Ocean, from Childe Harold, illustrates well, not only many of the consonant sounds found in the first selection above, but also the rhetorical force of the vowel, especially in poetry, and the reader's need of a power of full, strong, and true vowel production:

"Roll on, thou dark and deep blue ocean,—roll!
Ten thousand fleets sweep over thee in vain;
Man marks the earth with ruin; his control
Stops with the shore; upon the watery plain
The wrecks are all thy deed, nor doth remain
A shadow of man's ravage, save his own,
When for a moment, like a drop of rain,
He sinks into thy depths, with bubbling groan,
Without a grave, unknelled, uncoffined, and unknown."

It is with the hope that teachers and students of reading will seek to find and preserve in the selections they read, the sound characteristics that lend beauty and strength to the literary form, that the above illustrations have been given. If the student will give full value to the sound forms the artist has chosen to clothe his thought in, under the influence

of the latter's thoughts and feelings, he will read so as to secure for himself the best training in phonics, —a training that is superior in every way to drill upon dead lists for pronunciation.

SECTION V.

DIACRITICAL MARKINGS.

The English language is not spelled phonetically and the same sound must often be represented in a variety of ways. Hence any English dictionary must use a system of diacritical markings as a means of indicating the exact pronunciation of words, regardless of their spelling. Every dictionary provides a table explaining the meaning of its signs and markings, so that one who uses the work intelligently can determine what sound each sign or marking represents.

The following markings are placed with certain letters or words to indicate their pronunciation: ¯ (macron), ¨ (diaeresis), ˙ (semi-diaeresis), ˘ (breve), ~ (tilde), ∧ (broad or circumflex accent), ^ (circumflex accent), ∧ (caret), ⊥ (suspended or dotted bar), ¸ (cedilla), ´ (acute accent), ` (grave accent), - (hyphen), ’ (apostrophe).

The following are the most important tables of diacritical markings with which one should be acquainted:

TABLE OF EQUIVALENTS USED BY WEBSTER'S DICTIONARY (OLD ED.)

ā=ę.	ô=ą.	ī=ȳ.
â=ê.	o͝o=o͞o=u̇.	oi=oy.
ē=ĭ=ee.	o͝o=o͡o=u̇.	ou=ow.
ē̃=ī̃=û.	ŏ=ą.	ū=ew.
ĭ=y̆.	ŭ=ȯ.	
f=ph.	k=c=ch.	s=ç.
g=g̃.	ng=n̲.	z=s̲.
j=ġ.	s̲h=zh.	x=ks.
	sh=ç̲h.	x̲=gz.

The signs which have no equivalents are: *ă, ĕ, ŏ, ä, ȧ, b, d, h, l, m, n, p, qu* (pronounce *kw*), *r, t, v, w, y, th, th, ch, wh.* So far as possible Webster's dictionary marks each word as spelled wherever the marking is necessary. Only those words or parts of words are respelled phonetically that cannot be marked without it.

THE PHONIC ALPHABETS OF THE THREE NEWEST DICTIONARIES.

Webster's New International Dictionary and the Century Dictionary now employ diacritical systems that use very few equivalents. The Standard Dic-

tionary employs the scientific alphabet adopted by the American Philological and the American Spelling Reform Associations. In each of these three cases, the word is given first in its accepted spelling and is then respelled phonetically in parenthesis. The table on opposite page gives a comparative view of the three systems and words marked according to each.

NOTE.—In the International, the dotted bar (ˌ) indicates the shortened long sound of the vowel, as it naturally sounds in unaccented syllables. Obscure vowel sounds, or vowel sounds tending to ŭ, are indicated by the Italics, *e* and *a*.

In the Century a single dot under a vowel in an unaccented syllable indicates its abbreviation and lightening, without absolute loss of distinctive quality (comp. ˌ of the International). A double dot under a vowel in an unaccented syllable indicates that its sound is variable to the sound of short ŭ. A ⏑ under t, d, s, z, indicates that they are variable to ch, j, sh, zh.

In the Standard, the mark ⏑ under an unaccented vowel indicates that in colloquial use the sound varies toward short ĭ as in pĭty. The mark ⌒ under a vowel indicates that in colloquial use the sound varies toward short ŭ, as in bŭt.

The three dictionaries differ slightly in some matters of pronunciation; hence it has been necessary to represent a single sound sometimes by two or three equivalents, and the same sign seems to stand for more than one sound.

VOWELS.			CONSONANTS.		
International.	Century.	Standard.	International.	Century.	Standard.
á or *a*	á or a̤	ɑ and o̤	b	b	b
ä	ä	ō	d	d	d
ă	a	a or a̤	f	f	f
â	ā	ā	h	h	h
ĕ	e	e	j	j	j
e	ē	e̤ or e̥	k	k	c or k
e	e̤	e̤	ch	ch	ch
ē or û	ė	e̤r, ŭ, or e̤	l	l	l
ā	ā	ê	m	m	m
a̤	a̤	ê	n	n	n
ĭ (ў final)	i	i	ng or n̲	ng	ng or n
ē	ē	î	p	p	p
o̤	o̤	o	kw	kw	cw
ō	ō	ō	r	r	r
ŏ	o	ɵ or e̤	s	s	s
ô or a̤	â or ô	ē	t	t	t
o͝o or u̇	u̇	u	th	th	th
o͝o or u̇	ö	ū	th	TH	dh
u̇	ū	ū, iu, or j ū	v	v	v
ŭ	u	ʊ or e̤	w	w	w
ī	ī	ɑi	ks	ks	x
ou	ou	ɑu	gz	gz	gz
oi	oi	øi	z	z	z
ū	ū	iū or ü	sh	sh	sh
y	y	y	zh	zh	zh
N (French nasal of preceding vowel.)	ñ French nasal.	ñ (n silent)	hw	hw	hw
no equiv.	ü (Ger. ü Fr. u.)	no equiv.	k (approximate only.)	ch	H (Scotch and German ch.)

USE OF THE THREE SYSTEMS ILLUSTRATED.

Correct Spelling	International.	Century.	Standard.
Discountenance	dĭs-koun'tē̇-nans / dis-koun'tę̈-nans		dis-coun'tę̈-nans
Deadener	dĕd''n-ēr	ded'n-ér	ded'n-ẹ̈r
Composition	kŏm'-pō̇-zĭsh'ŭn	kom-pō̤-zish'ǫn	cōm''po-zish'un
Philosophy	fĭ-lŏs'ō̇-fў	fi-los'ǭ-fi	fi-lɒs'o-fi
Achievement	ȧ-chēv'ment	ạ-chēv'mẹnt	o-chîv'mẹnt
Element	ĕl'ē̇-mĕnt	el'ē-ment	el'ẹ-mẹnt
Electromotor	ē̇-lĕk'trō̇-mō'tēr	ē̤-lek-trō̤-mō'tǫr	ẹ-lec''tro-mō'tẹ̈r
Enough	ē̇-nŭf'	ē̤-nuf'	ẹ-nʊf'
Queer	kwēr	kwēr	cwîr
Whither	hwĭth'-ēr	hwiŦH'ér	hwidh'ẹ̈r
Exaggeratė	ĕgz-ăj'ēr-āt	eg-zaj'ę̈-rāt	egz-aj'ẹ̈r-êt

SECTION VI.

RELATION OF PHONICS TO EXPRESSION IN READING.

So far as expression in reading is concerned, it is the end of all work in phonics to beautify the oral word. In order to obtain this result the parts of the word must be perfected.

As the muscles controlling the organs of speech are the means by which speech-forms, with or without voice, are produced, the degree of accuracy and force with which they act determines the ease or difficulty with which the word is heard, as well as its attractiveness. The degree of precision or sharpness with which the muscles place the vocal organs in position for the various sounds, determines the clearness or accuracy of those sounds.

To secure the correct position of the vocal organs, as in the cases of *t* or *l*, the muscles must be controlled with as much care as the violinist exercises in pressing upon the strings of his instrument to produce very delicate and accurate tones. In the above cases no slipping or sliding of the tongue should be allowed. To test the difference in effect, start to

pronounce the sound *l* before the tongue is fully placed; hold the tongue carelessly, allowing it to slip from its position as the sound ceases. Compare the sound thus produced with that obtained when special care has been taken both to place the tongue well before beginning to pronounce and to hold it lightly and firmly. The difference is evident. Speech is a physical act controlled by the will, and, as in any physical exercise, the muscles and organs employed must be actively, vigorously, yet delicately directed, if the result is to possess character and beauty.

As no two faces are exactly alike, but differ in size and shape, so each sound has its own form, the mould or chamber in which it is created in response to the will of the individual, and these sound-molds or forms give place to one another with wonderful rapidity as the various sounds of a word require. The tongue is the primary agent employed in changing the shape of the mouth cavity. For example, as the tongue rises to the soft palate for hard *g*, the sound is held in a small chamber between the back of the tongue and the pharynx until the barrier thus formed has been forced away and the air escapes into the larger mouth chamber, allowing the sound to be heard. In *d*, *l*, *th*, and *r*, the lifting of the point of the tongue produces moulds or chambers of

other shapes and sizes, each corresponding to the sound given. The slightest deviation from the correct form produces a change in the sound itself.

In drilling the pupil for correctness of sound, the teacher should closely watch the action of the muscles, so far as possible, and the width and shape of the mouth opening, and should insist that no movements occur during the production of the sound, except in the cases of the diphthongal vowels ō and ā, where the movement should be ample, and the mute consonants, where the movement should be as slight as possible.

A knowledge of the form of the sounds and of the action of the muscles in producing them, furnishes the teacher with useful criterions to assist the ear in determining and locating special difficulties that prevent an easy and accurate utterance. These criterions need not be given to any except those who are fitting for teachers of the work. In teaching the sounds to children the muscular action should not be spoken of, if the fault in production can be corrected through the ear, as the muscles of speech tend to respond spontaneously to the suggestions of the auditory impression. In some cases, however, where the faults in speech have become too thoroughly fixed and habitual, nothing will secure the correct form but a conscious placing of the organs.

After the separate sounds can be given well, they should be combined in words, the requirement being that not only the word as a whole, but also each part of it, be accurately given. Here we really begin to realize the effect of careful work in phonics on expression in reading. In seeking to make this very essential connection between oral reading and drill in phonics, care and thought in the selection of materials may be of great assistance.

Poetry lends itself more readily than prose to this phase of work in phonics. When working first for clearness and accuracy of pronunciation and enunciation, many lines from such poems as Whittier's Snow Bound or Browning's Pied Piper are especially useful. More difficult tasks for the same end are to be had in sentences where alliteration is the prominent feature. In this first step in drill nothing in particular should be said to rebuke the pupil's harshness or seemingly laborious effort in securing the desired clearness, but no mumbling or blending of words, and not the slightest indistinctness or incompleteness of pronunciation should be tolerated. Days, and perhaps weeks, will need to be spent in obtaining this first requisite of good speaking.

Selections may then be chosen to assist in developing greater ease in the action of the muscles, and greater lightness, delicacy, and sweetness of sound.

Here the following serve as good examples: Tennyson's *Bugle Call*, Dicken's *The Ivy Green*, Scott's *The Lay of the Last Minstrel*, and *The Universal Prayer*, by Pope. The first two will be found easier than the others. If good work is done at this point, a lengthening of the vowel sounds will be noticed. A slight definite touch on the consonants at the beginnings and endings of words, and as nearly absolute perfection of vowel sounds as possible, should be secured.

Such selections as, *Old Ironsides*, by Holmes, *Naseby* by Macaulay, *The Winds* by Bryant, easily assist in securing force or strength in the action of the muscles. Many persons, though able to speak clearly and easily, never use the muscles of the face and throat with sufficient strength to be heard beyond a short distance; or, if they are heard at all, they never impress the listener with the idea that they have any reserve power. Again, the sentiment often demands that the muscles act as if biting or rending the words one from another. A certain hardness of tone, a tension in the action of the muscles, and a distinct separating of the words, are the criterions.

Still others, though speaking clearly and strongly, cannot speak rapidly without tripping. It is then necessary to work for flexibility of muscular action

on such selections as the *Culprit Fay* (especially the last four stanzas) by Joseph Rodman Drake, Milton's *L'Allegro*, and some stanzas from Browning's *Pied Piper*. Here the teacher should work to eliminate all appearance of effort in the enunciation. The production of words clear and sweet, issuing as water from a bubbling fountain, fit symbols of free thought, is the end sought.

It is well for the teacher to drill consciously upon the above steps, spending time upon each according to the needs of the class.

Other selections, especially those selected from the regular lessons of the day, are to be used in the emphasis of each of the above steps. Indeed, all selections, whatsoever, illustrate to a greater or less extent all of the above requirements placed on enunciation and pronunciation; if the effects they seek are not actually carried over into the daily reading and speech of the child, the teacher's work has failed of its purpose. Furthermore the style of enunciation should be suited to the thought and sentiment of the literature read. The quick utterance demanded in the fourth step would but poorly serve the thought of *The Universal Prayer*, and the beauty of the *Bugle Song* and *The Ivy Green* would be utterly ruined by allowing the harshness permissible in the first and third steps.

Good results will hardly be obtained unless the teacher can furnish examples of what is desired. New ideals must often be set up in the mind of the pupil, and the desire must be created to exchange the old slovenly habits of enunciation and pronunciation for a phonetically beautiful, refined, and appropriate speech.

Poor health and a meager muscular development of the body affect speech materially. The teacher may overcome these difficulties, to some extent at least, by such exercises as may be given in any class room in any suitable dress.* A weak or nervous voice suggests general physical weakness at once.

That the body, and consequently the voice, may respond to the demands made upon them in all phonic drill and subsequently in reading, the muscles of the chest and waist especially must be well developed, the chest held high, and the head erect.

Often a cramped, indistinct tone is due almost entirely to a bent head and lowered chest. It is not the province of this work to give directions for special exercises, but rather to suggest the benefit and need of such work in connection with reading. The teacher should fit herself to give simple breathing exercises and to apply them to voice work; these should include exercises that will improve the

*The reader is referred to "Physical Culture," by Louise Preece, published by C. W. Bardeen, Syracuse, N. Y.

general bearing of the pupil. Exercises that invigorate and that induce an atmosphere of cheer are of great value.

Good oral reading depends, first, upon the ability to think well, and, second, upon the power of true and forcible physical response.

SECTION VII.

THE RELATION OF PHONICS TO THE TEACHING OF READING.

One of the first questions of method, for which the teacher of reading must seek an answer, is how far a knowledge of the phonic structure of speech may properly be made to subserve the ends of teaching reading. Some teachers discard the phonic analysis and synthesis of words almost wholly; others find in them almost their sole starting point in teaching reading. Again, some teachers rely very largely upon rigid drill on the sound-elements of speech and on the formal lists of words, to secure the habit of correct pronunciation, while others make the cultivation of this habit incidental to the reading of a text. It is probable that there is a measure of right practice and thought underlying all these different points of view.

A word or sentence is first and foremost a means of expressing or conveying thought, and must be employed and regarded first in that light. But quite different words contain common elements of speech and hence an alphabet is employed, each

letter of which represents more or less constant sound values. A knowledge of these sound values, therefore, gives independence and readiness in the recognition of new words. Again, drill in the elements of speech and on formal lists of words serves to exercise the vocal organs in the production, and the ear in the recognition, of correct sounds. But, on the other hand, habits thus formally initiated are very difficult to carry over into the acts of reading and oral discourse, where older and stronger habits are still dominant; correct and cultured pronunciation must be made an incidental end during the expression of thought. How such apparently extreme requirements are to be harmonized can only be determined by some inquiry into the way in which nature first leads the child into the possession of language.

The infant plays with a number of objects upon the floor, among which is a top. Eyes, ears, fingers, perhaps even mouth, contribute to his knowledge of the object. During his play he hears the word "top" spoken by those around him. Primarily the object "top," and the word "top," as he hears it spoken, are two quite separate and unrelated things; at this time the *latter* has not yet become to him a sign of the *former*. But the object "top," an experience of sight, touch, etc., and the word "top" an experience

of sound, come into his consciousness repeatedly at the same time; they are co-existent experiences. We say, therefore, they become associated with each other in his mind. This association finally becomes so intimate that the child no longer dwells upon the word "top," as a peculiar combination of sounds; but, as soon as the word is heard, passes instantly to the mental image of the object, "top." The word heard, *i. e.*, the so-called auditory image, has now become a complete symbol as to its function in the child's activity. It has no further significance for the child than the instantaneous suggestion of images, or thought. We have here a prototype of the relation that all symbols, primarily, should bear to the images expressed.

The child's ability to understand language always far outstrips his own powers of speech. In time, however, he begins to realize that he can produce certain articulate sounds at will. For a time he is content to exercise his vocal organs in the production of more or less elementary, and often uncouth sounds, or syllables; *e. g.*, dä, dä, dä, dä, or ēdā′, ēdā′, ēdā′. Very often some of his own babblings, by the same law of repetition and of association with certain objects, become, both to himself and to others, the sign of thought images; thus, for example, nänä, comes to signify to one child, "milk," "bottle,"

"dinner," etc. Soon he begins to imitate the speech of others and thus, in addition to the power to understand speech, gradually acquires the power of speaking. Notice that an entirely new element has now entered into the child's grasp of language. Before, sound or auditory images alone were intimately associated with thought images; now images of articulation, *i.e.*, of the muscular action of the organs of speech, enter into intimate association with the thought and sound images. At first the images of articulation were to the child things in themselves, as were the sound images; he delighted to experiment with them, to produce them repeatedly, to drill himself, as it were, in articulation. But gradually they lose their significance to the child as attractive things in themselves, and, by intimate association with the thought images and sound images, also become signs of thought. But,—be it especially emphatic,—the child never learns to speak (with the possible exception of a few isolated words) by making the main conscious aim of his endeavor the production of words as others speak them. He strives to express his thought, to communicate, and leaves form of expression to the care of a more or less unconscious imitation. His every effort is bent upon communication; quite independently of schools and tutors, he ultimately reproduces with

the utmost fidelity the language forms and habits of his environment.

The child's social relations in the family call forth the desire for communication, the need of means of self-expression. It is from the usages of his social environment that the child draws, by imitation, the forms of expression. Here "forms of expression" comprehends not only sounds, words, sentences, but also all the variety of emotional tones, inflections, emphasis, which the child so early and so readily acquires. As soon as the child has gained some facility in discoursing with others, we marvel at the apparently spontaneous power of expression, forgetting that every modulation, inflection, or emphasis has been part and parcel of his speech as fast as acquired, and not something differentiated from it. In other words, as he acquired the mastery of words and sentences he also acquired, in and with them, the tones, gestures, modulations, with which he was accustomed to hear them spoken. Making due allowance for differences in temperament, he reproduces with comparative fidelity the arts of expression common to his environment. So great is the power of imitation during this period of language learning, that not alone are pronunciation, inflection, and gesture largely determined by it, but the quality of the voice is materially affected. Body

culture, especially as seen in the arts and power of expression, has kept pace with soul-culture.

These considerations are all educationally significant. In so far as all children have acquired the power of expressive speech and gesture, have we a common basis for arranging them in classes. But some come to us laden with the language experiences of an environment rich and cultured in the arts of expression; they command the choicer, more extensive vocabularies, are physically more demonstrative, speak more grammatically, pronounce more correctly, exhibit greater variety of expression. Others, less fortunate, reproduce the wooden stolidity of physical expression, the more uncouth language forms, the meager vocabularies of less favorable environments. If the child's language is to be further developed in school it must be through the medium of a wholesome language environment and by a method that understands how to utilize what the child already possesses of language.

Let us now consider the two factors, the method of language expansion and the language environment of the school, somewhat more fully, for the present purpose of getting their relations to phonics.

1. METHOD. It is not necessary here to enter into a full exposition of early teaching of reading. For our present purpose certain fundamental thoughts

will suffice. We have already seen that by early and constant association with objects, acts, etc., those things which we call sounds and movements of the vocal organs, become symbols or signs of the mind's images.

Thus far three distinct elements enter into the child's language, viz.: the idea, the word as heard, the spoken word. The two latter are at first the chief means by which the child participates in the intellectual life of society. Probably the child's own speech is a most potent aid to his thought. It is a law of his physical being that all nervous stimulation set up from without, is not merely transmitted to the brain to be stored up as modification of the latter's structure, but that a part of the stimulation, at least, passes on at once through motor nerves, and results in movements of the body. To state the same thought psychologically, sensation tends to pass over into action. Thus habits of action and expression have been thoroughly established in close touch with all the child's sense experiences and ideas. Moreover, to express well, he must think in an orderly and complete manner. Witness the close accompaniment of action, expression, with all the child's mental life, in play, in imitation, in speech, even in the earliest nonsense babblings. In the child's own speech, then, lies the most powerful

bond between thought (mental image) and the new symbols which the school soon presents in the form of printed words, to be read by the eye, and written words, to be executed by the movements of the arm and hand. The latter do not concern us here; suffice it to say that ultimately the child's command of the mother tongue involves five distinct elements, more or less closely united,—idea or image of the thing in mind, word heard, word spoken, word written, word printed.

In the acquisition of the power to read the printed page, what shall be the motive for the child to make the effort,—for it is here assumed that his interest in the act must be prompted by a motive? Must it not be the same that unconsciously prompted the first effort at oral speech, the need of thought expression and thought communication? It is this need of thought communication which the skillful teacher of reading makes supply the motive for the first approach to the printed symbol. For this reason the primary teacher has introduced the child first not to the symbol, but to the vital thought, making the connection with the new symbol by means of the old heard and spoken symbols. For the same reason some primary teachers are now making the first printed symbol taught, simply a new form of language expression for the very activities of life in

association with which the child learned to speak. Nothing could be more natural or more effective. If the activities of childhood are made to furnish the motive of learning thought communication by reading, both interest and assimilation are at their strongest. Not only are the ideas communicated familiar, and hence full of meaning and interest, but they are represented by the most forcible and best commanded symbols in the child's vocabulary. The close and intimate association in the child's experiences between the image and the act of speaking about it, renders the latter (the act of speaking) a powerful aid in all his future language growth, especially in learning reading. To the child, then, the printed symbol should be a sign of the thoughts to be communicated, just as are his oral and auditory symbols.

But the printed English word is a symbol of more than thought. If it were not, it would in no wise be any advance upon the Chinese system of a symbol for every word. The word as a whole is a symbol both of some mental image and of a combination of sounds, since each letter is theoretically the representative of a sound. One cannot rely wholly upon the phonic value of letters as they occur in English words. Yet they are some clue to the pronunciation of new words. The word as a whole has not reached its

complete function if it is only able to suggest the appropriate thought. In silent reading, which every one needs to cultivate, this is enough; but even then there is probably a strong tendency to articulate. In its complete function the printed word should be able to suggest the spoken word, as readily as the thought. It should do this first before the act of silent reading is cultivated.

The fact that the printed word symbolizes the movements of articulation, as well as the thought, gives rise to the necessity of using phonics to some extent in the early teaching of reading. Here again the approach should be from the need to the means of meeting it. In the effort to read the child should be lead to see how he can help himself in getting command of the symbols. Analysis and synthesis of words is the means; independent reading the end. Gradually he acquires a knowledge of what order and system there are in the printed page. He uses this knowledge in mastering new pages. Incidentally the act of phonetic analysis and synthesis may be made to give greater precision, accuracy, and character to his pronunciation, if not better quality and greater force to his voice. Hence the need of careful culture in these respects on the part of the teacher; herein lies the teacher's motive for a study of phonics, which brings us to the second con-

sideration, the child's language environment in school.

2. ENVIRONMENT. We shall limit our thought here chiefly to what deals with the phonetics of language. One who is accustomed to view the teacher as a suggester in her sphere, and to watch the children for evidences of response to her suggestions, knows how desirable, and yet how rare, a gift in her is the power of clean, forcible, expressive speech. Not the least of its benefits is the unconscious reaction in the children before her. The pure tone, the rich quality, the sympathetic, natural, and subdued modulation, the incisive, exact, but easy pronunciation, are a few of the elements of that art of speech, woefully deficient in so many teachers. If the crude phases of speech in childhood are due to environment, we can only secure their displacement by placing and emphasizing in the child's school environment that which represents vigor, beauty, and culture in speech. The single daily recitation cannot accomplish it. Possibly, in some cases, the school cannot accomplish it at all; but its duty, at least, is to give what right emphasis it can, in the most natural way, to a facility that is always a mark either of culture or provincialism,—oral speech. The unconscious imitative response of the child to the forcible elements of its environment suggests an important

function of the teacher. Not one, but six hours a day, must she be one of those forcible elements, by constant exemplification in herself of that which the child should be,—in this case, of good speech, not alone grammatically, but also phonetically.

Herein, finally, lies the importance of giving the child broad experiences with the rhetorical effects of sound. It is largely the beauty, force, and rhythm of sound that make for literary effect, especially in poetry. Without some appreciation of the relation of the sounds of spoken language to the poetic and literary form (compare the selections on pages 25 and 26) one cannot go far in the cultivation of a love for literature, as such. The love for literature, especially in the early years, grows in proportion as the power to appreciate the use of sound forms is enhanced by contact with a favorable environment; *e. g.*, by listening to those who can read or recite with good effect. With many the love for literature dates from the time they became a part of the circle of listeners that gathered to enjoy the evening readings of the family. Possibly we little understand how much we owe to the rhythmic flow of sound that clothes the nonsense of Mother Goose. A study of phonics, as the science of the right production of pure sounds, can only contribute to a part of the teacher's efficiency as an inspiring reader; the study

of literary thought, of rhetoric, and of poetic forms must do the rest. But it is incumbent upon the teacher to give the child higher conceptions of the use of sound in oral expression. This cannot be done alone, as some teachers seem to think, by the analysis of the thought content of the literary product. It must come through the teacher's own example. There should be times in the reading experiences of every class, when the use not only of pure and beautiful tones, but of gesture and facial expression, in fact, of the entire physical personality, in relation to the literary spirit and thought and as a medium of expression, should be sympathetically illustrated by the teacher as she reads to her pupils without comment. It is both possible and desirable to teach literature, in part, by reading *for* the student. To vocalize an entire poem before the class, is to increase the sound experiences of that class; and these experiences are the more valuable in that they are intimately associated with the inspiration the hearer draws from the spirit and thought of the literature. It is, then, the teacher's duty, in part, to read often and long for the enjoyment and inspiration of her pupils. The results of such work will be manifest in the almost instinctive reflection, in the future reading of the student, of that which he has unconsciously absorbed, both of inspired thought and inspired expression, from the suggestions of his teacher's reading.